

and issued as reissued patent no. RE37008, which application is a reissue application of application no. 08/476,198 filed on June 7, 1995, and issued as Patent no. 5,635,235, which application is a divisional application of 08/192,458 filed on February 7, 1994 and issued as Patent no. 5,592,870."

Replace the paragraph beginning at column 5, line 49 with the following:

The preferred masa handling system 10 (FIG.1) is a part of a larger arrangement of apparatus intended for the commercial production of tortillas or other food having a masa dough as an ingredient. The general arrangement of the preferred masa handling system 10 will now be described. A commonly available commercial mixer 12 is located at the beginning of the production line. The mixer 12 has a pivoting door 14 which can rotate downward towards a masa 18 and feeds a generally continuous masa stream 20 through a nozzle 22. Two vertically opposed and aligned endless belt separator conveyors 24 and 26 have moving surfaces 28 and 30 which face each other. The longitudinal ends 32 and 34 of separator conveyors 24 and 26 are mounted adjacent to the nozzle 22. One of the two separator conveyors 24 is "L" shaded and has vertical section, or vertical portion, 36 and a horizontal section, or horizontal portion, 38 which terminates above [a] an intermediate masa hopper 40 that is in between two feed conveyors as shown in Fig. 1. The vertical section 34 of the "L" shaped separator conveyor 24 extends longitudinally below the longitudinal end of the other separator conveyor, thereby providing a moving surface opposite from the nozzle 22. A deflector plate 41 is mounted on the end of the other separator conveyor 26. The previously

discussed separator conveyors 24 and 26 move the masa 18 to the ~~first~~ ⁷ intermediate masa hopper 40. ~~The~~ ⁷ ~~That~~ ⁷ ~~masa~~ ¹⁸ ~~hopper~~ 40 must be supplied with masa 18 periodically.

Replace the paragraph beginning at column 6, line 9 with the following:

A selectively operable diverter gate, for periodically allowing resupply of the masa hopper 40, is located [adjacent to the end 44 of] in a gap between an upstream feed conveyor ⁷ ~~the horizontal section 38 of the "L" shaped separator conveyor 24~~ as shown in Fig. (1) and a downstream feed conveyor 46. The diverter gate 42 is shown in its open gap position. However, when the diverter gate 42 is [closed] in a closed gap position, its top surface 45 forms a gravity slide that feeds to a horizontal downstream feed conveyor 46, which, in turn, feeds another masa hopper which, as shown Fig. 1, may be an end masa hopper 48. It will be understood that while two masa hoppers 40 and 48 are shown the masa handling system 10 can be adapted for use with any number of masa hoppers. Therefore, the invention is not limited by the number of masa hoppers.

Replace the paragraph beginning at column 7, line 21 with the following:

The selectively operable diverter gate 42 (FIG. 5) is mounted in a gap between an upstream 98 and a downstream 100 endless belt feed conveyor and guides the masa logs 74 to the appropriate masa hopper. The feed conveyors 98 and 100 are positioned end to end thereby forming the gap between them (as shown in Fig. 5), and are vertically spaced so that the masa logs 74 can move from one feed conveyor 98 and 100 to the next, in series. The diverter [gaze] gate 42 is pivotally mounted on

the downstream feed conveyor 100 and, in the closed gap position, extends to the end of the upstream feed conveyor 98 thereby closing the gap by forming a gravity slide between the two feed conveyors 98 and 100. In the open gap position, the diverter gate 42 is withdrawn from the upstream feed conveyor 98. While two diverter gates 42 are shown, any number can be used, depending on the number of masa hoppers 40 desired. Generally, every masa hopper 40, except the last in the series, has an associated diverter gate 42 mounted above it. The last masa hopper 40 does not have a diverter gate 42 because a feed conveyor 46 terminates above it. It will be understood, however, that the last masa hopper 40 could have an associated diverter gate 42 should the diversion of masa 74 from that masa hopper 40, for recycling or other purposes, be desired. The diverter gate 42 must be driven by a device in order to move between the open and closed positions.

Replace the paragraph beginning at column 9, line 48 with the following:

The process begins (FIG. 1) with the initial creation of the masa 18 in the mixer. When the masa 18 is suitably mixed, the pivoting door 14 opens and allows the attending workers to transfer the masa 18 into the extruder 16. The extruder 16 drives the masa 18 through the nozzle 22 so that a generally continuous masa stream 20 is projected up against the vertical surface 28 of the "L" shaded separator conveyor 24, which is moving upwards. The friction between the masa stream 20 and the vertical surface 28 of the "L" shaped conveyor 24 guides the masa stream 20 between the separator conveyors 24 [and] and 26. The masa stream 20 is pulled until it fractures into masa pieces, or masa logs 74. As used herein, the term "masa logs" 74 generally

refers to pieces of masa separated from the generally continuous masa stream 20, including those with a generally oval cross section. The masa logs 74 travel upward and are guided onto the horizontal portion 38 of the "L" shaped separator conveyor 24 by the [detector] deflector plate 41. The masa logs 74 then travel to the selectively operable diverter gate 42, which can either be automatically opened to allow the masa logs 74 to drop into

Replace the paragraph beginning at column 11, line 16 with the following:

The [detector] deflector plate 41 guides the masa logs 74 onto the horizontal portion 38 of the "L" shaped separator conveyor 24. The masa logs 74 then move towards the selectively operable diverter gates 42. The photo-sensor 106 mounted adjacent to each masa hopper 40 senses the level of masa 74 therein. If the level of the masa 74 within any one masa hopper 40 drops below a predetermined level, the sensor 106 associated with that masa hopper 40 changes the state of its signal which is sent to the PLC 104. The PLC 104 then commands the pneumatic cylinder 102 to retract the diverter gate 42 located above that masa hopper 40. That diverter gate 42 pivots into an open gap position and the masa logs 74 then fall into [that] the intermediate masa hopper 40. The photo-sensor 106 then signals the PLC 104 when the level of masa 74 within that masa hopper 40 rises above a certain predetermined level. The PLC 104 then commands the pneumatic cylinder 102 to extend, thereby closing that diverter gate 42 and allowing the masa logs 74 to travel on to the next masa hopper [40] 48.